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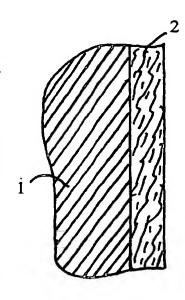
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(54) Title: SYSTEM FOR A DENTAL FILLING MATERIAL OR IMPLANT MATERIAL, AND POWDERED MATERIAL, HY-DRATION LIQUID, IMPLANT MATERIAL AND METHOD OF ACHIEVING BONDING



(57) Abstract: A system for a dental filling material or an implant material, alternatively a system for bonding between a tooth or a bone and a dental filling material and a implant material, respectively, which system comprises a water based hydration liquid and a powdered material, the binder phase of which powdered material essentially consisting of a calcium based cement system, which powdered material has the capacity following saturation with the liquid reacting with the binder phase to hydrate to a chemically bonded ceramic material. According to the invention, said powdered material and/or said hydration liquid comprises water soluble phosphate or a phase that has the capacity to form water soluble phosphate, whereby the system exhibits the capacity during hydration to form apatite. The invention also relates to the powdered material and the hydration liquid as such, an implant material and a method of achieving bonding.

INTERNATIONAL SEARCH REPORT

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IPC7: A61K 6/06, C04B 28/06 According to International Patent Classification (IPC) or to both national classification and IPC									
B. FIELDS SEARCHED	B. FIELDS SEARCHED								
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Documentation searched othe	r than minimum documentation to the	extent that such documents are included i	n the fields searched						
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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)									
C. DOCUMENTS CONS	IDERED TO BE RELEVANT								
Category* Citation of doc	Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim N								
A WO 002148 20 Ap	WO 0021489 A1 (DOXA CERTEX AKTIEBOLAG), 20 April 2000 (20.04.00)								
A WO 017653 18 Oc	WO 0176534 A1 (DOXA CERTEX AKTIEBOLAG), 18 October 2001 (18.10.01)								
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A WO 017653	1-38								
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Further documents as	re listed in the continuation of Box	C. X See patent family anne	х.						
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	nt document n search report		Publication date		Patent family member(s)	Publication date
WO	0021489	A1	20/04/00	AU	1305300 A	01/05/00
NO	0022.00	• • •	-0, ,	BR	9914430 A	26/06/01
				CA	2342584 A	20/04/00
				CN	1109536 B	28/05/03
				CN	1323188 T	21/11/01
•				EP	1121087 A	08/08/01
				HU	0103371 A	28/12/01
	•			JP	2002527366 T	27/08/02
				NO	20011848 A	12/06/01
				SE	514686 C	02/04/01
				SE	9803502 A	13/04/00
WO	0176534	A1	18/10/01	AU	4701901 A	23/10/01
NO	U			AU	6035400 A	09/01/01
				BR	0109839 A	03/06/03
				CA	2405016 A	18/10/01
				CN	1422141 T	04/06/03
				EP	1204891 A	15/05/02
				EP	1272145 A	08/01/03
				JP	2003502709 T	21/01/03
				NO	20024863 A	11/12/02
				SE	516264 C	10/12/01
				SE	0001321 A	12/10/01
	•			US	6570140 B	27/05/03
				US	2002088796 A	11/07/02
WO	0176535	A1	18/10/01	AÜ	4702001 A	23/10/01
				AU	6035500 A	09/01/01
				BR	0109842 A	03/06/03
				CA	2374357 A	28/12/00
				CA	2405028 A	18/10/01
				EP	1205030 A	15/05/02
				EP	1272146 A	08/01/03
				JP	2003502979 T	21/01/03
				NO	20024862 A	11/12/02
				SE	516263 C	10/12/01
				SE	0001322 A	12/10/01